

Appln No. 10/694,118  
Amdt date March 31, 2004  
Reply to Office action of N/A

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method for ablating tissue in or around the heart comprising:

introducing into the heart the distal end of a catheter, wherein the catheter includes a needle electrode at its distal end, the needle electrode being in a retracted position within the distal end of the catheter;

introducing a distal end of the needle electrode into the tissue, including moving the needle electrode from its retracted position within the distal end of the catheter to an extended position outside the distal end of the catheter;

infusing into the tissue an electrically-conductive fluid through the needle electrode while in the extended position [~~and into the tissue~~]; and

ablating the tissue after and/or during introduction of the fluid into the tissue, whereby the fluid conducts ablation energy within the tissue to create a larger lesion than would be created without the introduction of the fluid.

2. (Original) The method according to claim 1, wherein the tissue is ablated using the needle electrode.

**Appln No. 10/694,118**  
**Amdt date March 31, 2004**  
**Reply to Office action of N/A**

3. (Original) The method according to claim 2, wherein radio frequency energy is delivered to the needle electrode for the ablation.

4. (Original) The method according to claim 1, wherein the tissue is ablated using a tip electrode on the distal end of the catheter.

5. (Original) The method according to claim 1, wherein a portion of the needle electrode that is introduced into the tissue has an insulating coating.

6. (Original) The method according to claim 5, wherein the insulating coating is over a portion of the needle electrode that is in contact with the endocardial surface of the tissue being ablated.

7. (Original) The method according to claim 1, wherein the needle electrode comprises nitinol.

8. (Original) The method according to claim 1, wherein the needle electrode is introduced to a depth ranging from about 2 to about 30 mm.

9. (Original) The method according to claim 1, wherein the needle electrode is introduced to a depth ranging from about 4 to about 10 mm.

**Appln No. 10/694,118**  
**Amdt date March 31, 2004**  
**Reply to Office action of N/A**

10. (Currently Amended) The method according to claim 1, wherein the needle electrode is introduced to a depth ranging from about [2] 3 to about [~~30~~] 20 mm.

11. (Original) The method according to claim 1, wherein the needle electrode is introduced to a depth ranging from about 5 to about 7 mm.

12. (Original) The method according to claim 1, wherein fluid is infused through the needle electrode during ablation.

13. (Original) The method according to claim 1, wherein fluid is infused through the needle electrode before ablation.

14. (Original) The method according to claim 1, wherein fluid is infused through the needle electrode before and during ablation.

15. (Currently Amended) The method according to claim 1, wherein the fluid infused through the needle electrode comprises saline having a salt content ranging from about 0.3 to about 4 wt% [~~7~~].

16. (Original) The method according to claim 1, wherein the fluid infused through the needle electrode comprises

**Appln No. 10/694,118**  
**Amdt date March 31, 2004**  
**Reply to Office action of N/A**

saline having a salt content ranging from about 0.5 to about 3 wt%.

17. (Original) The method according to claim 1, wherein the fluid infused through the needle electrode comprises saline having a salt content ranging from about 0.9 to about 2.5 wt%.

18. (Original) The method according to claim 1, wherein the fluid infused through the needle electrode comprises saline having a salt content ranging from about 1.5 to about 2 wt%.

19. (Original) The method according to claim 1, wherein the fluid infused through the needle electrode comprises a radiographic contrast agent.

20. (Currently Amended) The method according to claim [±] 19, wherein the amount of contrast agent present in the fluid ranges from about 5 to about 50%.

21. (Currently Amended) The method according to claim [±] 19, wherein the amount of contrast agent present in the fluid ranges from about 10 to about 30%.

22. (Currently Amended) The method according to claim [±] 19, wherein the amount of contrast agent present in the fluid ranges from about 10 to about 20%.

**Appln No. 10/694,118**  
**Amdt date March 31, 2004**  
**Reply to Office action of N/A**

23. (Currently Amended) The method according to claim 1, wherein the fluid is infused through the needle electrode at a rate ranging from about 0.3 to about 5 ml/min.

24. (Currently Amended) The method according to claim 1, wherein the fluid is infused through the needle electrode at a rate ranging from about 0.3 to about 3 ml/min.

25. (Currently Amended) The method according to claim 1, wherein the fluid is infused through the needle electrode at a rate ranging from about 0.8 to about 2.5 ml/min.

26. (Currently Amended) The method according to claim 1, wherein the fluid is infused through the needle electrode at a rate ranging from about 1 to about 2 ml/min.

27. (Currently Amended) The method according to claim [1] 3, wherein radiofrequency energy is introduced to the needle electrode at a power of up to about 70 watts.

28. (Currently Amended) The method according to claim [1] 3, wherein radiofrequency energy is introduced to the needle electrode at a power ranging from about 20 to about 50 watts.

29. (Currently Amended) The method according to claim [1] 3, wherein radiofrequency energy is introduced to the needle electrode at a power ranging from about 30 to about 40 watts.

Appln No. 10/694,118  
Amdt date March 31, 2004  
Reply to Office action of N/A

30. (Currently Amended) The method according to claim [1]  
3, wherein radiofrequency energy is introduced to the needle  
electrode for at least about 15 seconds.

31. (Currently Amended) The method according to claim [1]  
3, wherein radiofrequency energy is introduced to the needle  
electrode for at least about 30 seconds.

32. (Currently Amended) The method according to claim [1]  
3, wherein radiofrequency energy is introduced to the needle  
electrode for at least about 60 seconds.

33. (Original) The method according to claim 2,  
further comprising burning a surface lesion with a tip electrode  
on the catheter, wherein the surface lesion is burned at the  
endocardial surface of the tissue ablated with the needle  
electrode.

34. (Original) The method according to claim 1,  
further comprising taking an impedance measurement using the  
needle electrode before, during and/or after introduction of the  
distal end of the needle electrode into the tissue.

35. (Original) The method according to claim 34,  
further comprising adjusting the flow rate of the fluid infused  
through the needle electrode, an amount of power delivered to  
the needle electrode, and/or the time over which the fluid is

**Appln No. 10/694,118**  
**Amdt date March 31, 2004**  
**Reply to Office action of N/A**

infused and/or the power delivered in response to the impedance measurement.

36. (Original) The method according to claim 1, further comprising measuring the temperature of the needle electrode during ablation.

37. (Original) The method according to claim 36, further comprising adjusting the flow rate of the fluid infused through the needle electrode, an amount of power delivered to the needle electrode, and/or the time over which the fluid is infused and/or the power delivered in response to the temperature measurement.

38. (Original) The method according to claim 37, wherein the needle electrode is maintained at a temperature ranging from about 35 to about 90°C.

39. (Original) The method according to claim 37, wherein the needle electrode is maintained at a temperature ranging from about 45 to about 80°C.

40. (Original) The method according to claim 37, wherein the needle electrode is maintained at a temperature ranging from about 55 to about 70°C.

Appln No. 10/694,118

Amdt date March 31, 2004

Reply to Office action of N/A

41. (Original) The method according to claim 1, further comprising measuring electrical activity using the needle electrode before and/or after ablation.

42. (Original) The method according to claim 1, further comprising pacing using the needle electrode before and/or after ablation.

43. (Canceled)